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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/973,011	10/10/2001	Laurence Hamid	12-70 US	4760
25319	7590	02/10/2006	EXAMINER	
FREEDMAN & ASSOCIATES 117 CENTREPOINTE DRIVE SUITE 350 NEPEAN, ONTARIO, K2G 5X3 CANADA			LAROSE, COLIN M	
			ART UNIT	PAPER NUMBER
			2627	
DATE MAILED: 02/10/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/973,011

Applicant(s)

HAMID, LAURENCE

Examiner

Colin M. LaRose

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-11 and 13-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 11, 13 and 19 is/are rejected.
- 7) ☒ Claim(s) 2, 3, 5-10 and 14-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 14 September 2005 has been entered.

Response to Amendments and Arguments

2. Applicant's remarks have been fully considered but are now moot in view of the new grounds of rejection established below on the basis of newly discovered prior art.

Double Patenting

3. Claim 6 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 5. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claims 1-11 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 11, and 19 specify that the physical parameter is selected from a group “comprising” a moisture condition and an applied pressure. This limitation is indefinite because the term “comprising” is judicially recognized as being open-ended and non-limiting. Those skilled in the art are not reasonably apprised of the metes and bounds of the claims – viz. what would qualify as a “physical parameter” other than moisture condition and applied pressure. As written, the claim does not exclude any physical parameter, however, for examination purposes, the claim will be construed as limited to the physical parameter being either a moisture condition or an applied pressure since this construction is what was apparently intended by the current amendment. Suggested correction is to change “comprising” to -- consisting of --.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,845,173 by Takahashi.

Regarding claim 1, Takahashi discloses a method (figure 2) for fingerprint authentication comprising:

- a) acquiring an image of a fingertip of an individual (S101);
- b) processing the image to determine a value indicative of a moisture condition and applied pressure of the fingertip (S103-104: the image of the fingertip is processed to determine a value indicative of whether the finger was too moist/pressed too hard (yellow light), not moist enough/pressed too lightly (red light), or suitably moist/suitably pressed (green light) – see column 5);
- c) comparing the image to a stored biometric template, the comparison process based on the determined value (S108: the image is compared to a stored template only when the determined value is “green”); and
- d) performing one of an authentication and a rejection in dependence upon the comparison (S108; see also column 4, lines 36-44).

Regarding claim 19, Takahashi discloses a system (figure 1) for fingerprint authentication comprising:

- a sensing area (1) for capturing an image of a fingerprint of an individual presented thereto;
- a memory storage area (3) for storing captured images therein (i.e. the captured image is necessarily stored somehow within the fingerprint analyzer 3 so that it can be processed); and
- a processor (3) for executing code thereon to process the captured image to determine a moisture condition and an applied pressure of the fingertip (S103-104, figure 2), and to compare

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the captured image to a template image according to an image-processing process selected in dependence upon the determined value (S108, figure 2: the captured image and a template are compared according to a matching process, the matching process being selected for execution in dependence upon the determined value being “green”).

8. Claim 11 is rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,876,757 by Yau et al. (“Yau”). [See also pp. 25-26 of Yau’s provisional application 60/293,487]

Regarding claim 11, Yau discloses a method (figure 10) for processing a fingerprint image comprising:

- a) acquiring an image of a fingertip of an individual (step 1002);
- b) processing the acquired image to determine a value indicative of a moisture condition of the fingertip (steps 1008-1010 and column 9, lines 25-45: the image is processed to determine the presence of sweat pores, which indicate the moisture condition of the finger – i.e. whether the finger is moist and therefore living, or whether the finger is not moist and therefore either dead or not a finger);
- c) selecting an image processing process in dependence upon the determined value, the image processing process for removing a subset of features of the acquired image (steps 1014-1016: based on the finger having sweat pores and being living, an image processing process for removing arcs is selected and executed).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,876,757 by Yau et al. ("Yau") in view of U.S. Patent 6,845,173 by Takahashi. [See also pp. 25-26 and 37-39 of Yau's provisional application 60/293,487]

Regarding claim 13, Yau discloses a method (figures 1, 4, and 10) for fingerprint authentication comprising:

- a) acquiring an image of a fingertip of an individual (402);
- b) processing the image to determine a quality value of the fingertip image (406: determines a quality value as either sufficient quality or insufficient quality);
- c) processing the acquired image according to a pre-determined image processing process to remove a subset of features from the acquired image (figure 10: the image is processed to determine whether the finger is living and to remove noise (arcs) from the image at step 1016);
- d) selecting a biometric template in dependence upon the determine value (step 412: only if the value is "sufficient quality" is a biometric template selected from a database for comparison), the biometric template processed according to the predetermined image-processing process (e.g. the biometric templates enrolled in the database via the process of figure 1 have been subjected to the noise-removing process of figure 10 prior to enrollment);

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e) comparing the processed acquired image to the biometric template (414); and
f) performing one of an authentication and a rejection in dependence upon the comparison (414: the person is either authenticated as recognized or rejected as unrecognized on the basis of the comparison).

Yau does not disclose that b) the image is processed to determine a value indicative of a “physical parameter of the fingertip,” the physical parameter being either a moisture condition or an applied pressure. Rather, Yau merely determines the “quality” of the fingertip image and continues processing the image if it is deemed to be of sufficient quality; otherwise, the image is re-captured.

Takahashi discloses a similar fingerprint authentication method (figure 2), wherein the quality of the fingerprint image is evaluated (S103-104) to determine whether the image is of sufficient quality. If it is, then the image is processed for authentication (S108); otherwise, the image is re-captured (S101). Therefore, the basic operation of Yau and Takahashi is nearly identical.

However, Takahashi also teaches more details of the quality evaluation process, and in particular, that physical parameters of the fingertip such as moisture and applied pressure are evaluated to determine the quality of the fingertip image (see e.g. column 5). The quality evaluation process produces a value (Red, Green, or Yellow) that is indicative of the moisture condition/applied pressure of the fingertip, and the image is either further processed or re-captured on the basis of the determined value (see figure 2). Based on this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yau

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by Takahashi to achieve the claimed invention by determining a value indicative of the moisture condition/applied pressure of the fingertip (which are independent of the identity of the individual) for the purposes of quality evaluation, since Takahashi teaches that ascertaining the quality of the fingertip image in such a manner allows a user to be notified of the specific remedies required to correct an image having insufficient quality (column 1, lines 54-62).

Allowable Subject Matter

11. Claims 2, 3, and 5-10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Regarding claim 2, Takahashi does not disclose or suggest the comparison process involves different image processing steps for different determined values, as claimed.

Regarding claims 5 and 6, Takahashi does not disclose or suggest that different biometric templates are selected for different determined values, as claimed.

12. Claims 14-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 14, neither Yau nor Takahashi discloses or suggests providing a plurality of biometric template images of a same fingertip, wherein each biometric template is associated with a different predetermined physical parameter of a specific fingertip, as claimed.

Related Prior Art

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 6,330,345 by Russo et al.;

U.S. Patent 6,535,622 by Russo et al.;

U.S. Patent 6,983,062 by Smith; and

U.S. Patent 6,131,464 by Pare, Jr. et al.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colin M. LaRose whose telephone number is (571) 272-7423. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu, can be reached on (571) 272-7429. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2600 Customer Service Office whose telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Colin LaRose 
Group Art Unit 2627
3 February 2006